Issue Date: May 7, 2002

Effective Date: May 7, 2002

Expiration Date: May 7, 2003

<u>Subject</u>: Covered time frames for the eight statutory beryllium vendors.

Background: The Energy Employees Occupational Illness
Compensation Program Act (EEOICPA) specifically identifies eight
corporate entities as beryllium vendors. In doing so, the Act
has been interpreted to expand coverage to any employee engaged
in beryllium related employment activities occurring
concurrently with any period that the company was processing
beryllium for the Department of Energy (DOE). These beryllium
vendors include the following: Atomics International; Brush
Wellman, Incorporated and its predecessor, Brush Beryllium
Company; General Atomics; General Electric Company; NGK Metals
Corporation and its predecessors, Kawecki-Berylco, Cabot
Corporation, Berylco, and Beryllium Corporation of America;
Nuclear Materials and Equipment Corporation; StarMet Corporation
and its predecessor, Nuclear Metals, Incorporated; and Wyman
Gordan, Incorporated.

While the EEOICPA specifically designates these eight corporate entities as beryllium vendors, it is silent on the issue of when each was producing or processing beryllium for sale to, or use by, the DOE. Given this situation, it is within the purview of the Division of Energy Employees Occupational Illness Compensation (DEEOIC) to establish the covered time frames for the statutory beryllium vendors.

The National Office of the DEEOIC has reviewed records maintained by the Department of Energy. Based on this review, the covered time frame for each statutorily named beryllium vendor has been decided. Provided as an attachment to this bulletin is a list of the designated statutory vendors and the corresponding covered time frame for each (Attachment 1). The attachment provides the name of the beryllium vendor, a

description of the vendor and a summary of the evidence used to establish the effective date.

The effective dates of coverage are to be used by the Claims Examiner (CE) in determining whether or not an employee, contractor or subcontractor was present at a designated beryllium vendor during a time when the vendor engaged in producing or processing beryllium for use by the Department of Energy.

Reference: 42 USC § 73841 (6) and (7)

<u>Purpose</u>: This bulletin serves to enumerate the covered time frames for the eight statutory vendors named in the EEOICPA. In addition, it provides procedure clarification concerning the use of these time frames in determining covered beryllium employment.

Applicability: All Staff

Actions:

- 1. Upon receipt of a claim for compensation, the CE reviews the EE-3 Employment History form to determine whether any period of employment for a statutory beryllium vendor is claimed. Consideration should also be granted to contractors or subcontractors of the named vendor.
- 2. If there is any indication provided on the EE-3 that the named individual was employed at a statutory vendor as an employee, contractor or subcontractor, the CE must verify the employment. The CE should follow the normal routine established in the procedure manual and program bulletins for verifying employment. It is not necessary for the CE to verify the entire period of claimed employment with a beryllium vendor. Once the CE has verified that the individual was employed during any period of covered employment, the CE need not attempt to verify additional claimed employment.
- 3. If a claimed period of employment is verifiable and the employee was an employee, subcontractor or contractor of a statutory vendor, the CE must determine whether any period of verified employment occurred during a time when the vendor was engaged in processing or producing beryllium for the DOE. It is only necessary for the CE to establish one instance where the period of verified employment overlaps a covered time frame for

the named vendor. The CE must consider the fact that these particular eight statutory vendors have been specifically designated in the statute as covered beryllium vendors. A vendor may contain many different facilities located in various locations. The Act does not limit the covered employer to the particular facilities, thus employment with any facility of a statutory vendor during a period when the vendor was concurrently processing beryllium for the DOE is covered. This is true even if the employee was engaged in processing beryllium unrelated to any DOE operation.

The CE should use the information provided in Attachment 1 in making this determination. The CE should compare the dates of verified employment to the dates that have been determined by the National Office to be the time frame when the vendor was engaged in beryllium work for the Department of Energy. If any period of verified employment falls within the covered time frame for the statutory vendor, the CE can proceed with a finding that the employee is a covered beryllium employee as defined in 42 USC § 73841 (7). If the period of verified employment falls completely outside of the covered time frame for the vendor, the CE should follow the procedure for expanding covered time frames (See EEOICPA Bulletin 02-06).

4. If the claimant desires to review the records maintained by the National Office in regard to the covered time frames for the statutory vendors, a signed written request must be submitted to the appropriate district office. The district office will forward any such request directly to the National Office.

<u>Disposition</u>: Retain until incorporated in the Federal (EEOICPA) Procedure Manual

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Statutory Beryllium Vendors Covered Time Frames

1. Atomics International 1954-1966

Summary Description

Atomics International was contracted by the AEC in the late 1940s to design and test nuclear reactor fuel. Beginning in 1954, some of the work for the contracts was performed at the Van Own building at the Atomics International in Canoga Park. There was a machine shop at this location that processed beryllium components. The last document establishing a beryllium relationship between Atomic International and AEC is an accident report from 1965-66.

Supporting Documentation	
1954	The start date is established in a Tiger Team Assessment from April 1991.
	They reported that DOE Rockwell's Canoga Park facility (Atomics
	International was a component of North American Aviation. The parent
	company eventually became Rockwell International) was used starting in
	1954 to work on reactors. This work was conducted in a building where
	beryllium machining took place.
1966	A report from the AEC lists all accidents and incidents in AEC facilities
	involving radioactive material. Included in the document is a description
	of an accident that occurred when two employees were moving an
	irradiated beryllium temperature probe at the Canoga Park facility.

2. Brush Wellman Inc. and Brush Beryllium Company 1943-2001

Summary Description

Brush Wellman was the largest producer of beryllium related materials used by the AEC. The first contract that was made for the company to provide beryllium metal and beryllium fluoride was dated August 18, 1943. The last shipment of beryllium products to an organization linked to the atomic weapons production was 04/10/2001. This was reported to the Dept. of Energy in a listing provided by the company. There is a large pool of documentation supporting beryllium production for AEC and Dept. of Energy between the start and end dates.

Supporting Documentation	
1943	Excerpt from the Manhattan District History reveals the first contract for beryllium metal and beryllium fluoride was entered into effect on August 18, 1943.
2001	Contract listings from the Brush Wellman company describe shipments of beryllium products to Los Alamos National Lab through April 10, 2001.

3. General Atomics 1959-1967

Summary Description

General Atomics was involved in the Experimental Beryllium Oxide Reactor Project (EBOR). This was a project to develop a use for beryllium in gas-cooled reactors. General Atomics was awarded the program in January 1958. In September, 1959, General Atomics began using beryllium oxide in the project. The EBOR project was terminated in FY 1967.

Supporting Documentation		
1959	In a description of the Experimental Beryllium Oxide Reactor Project, a background summation of the project reveals that General Atomics was awarded the project and that use of beryllium oxide began in 1959. This	
	description was included in a Memorandum from the Director of the Division of Reactor Development and Technology.	
1967	The same memo as above recommends the termination of the EBOR project in 1967 due to technical problems and other uncertainties.	

4. General Electric 1951-1970

Summary Description

The Department of Energy relationship with General Electric in Lockland, Ohio, starts in 1951 as part of the Aircraft Nuclear Propulsion Project. The relationship is shown to terminate in 1970.

Supporting Documentation	
1951	Aircraft Nuclear Propulsion Facility - Evendale indicates that General
	Electric was conducting research and development of the aircraft nuclear
	propulsion project. This was being supported by the Air Force and the
	AEC.
1951	Memo describes that 2300 pound of beryllium fluoride has been sent to X-
	10 for use in the aircraft reactor program.
1954	Lockland Area Office memo describes the use of beryllium and beryllium
	compounds under the General Electric Company contract.
1960	Atomic Energy Commission
	Toxic Hazards of Beryllium As Related to the Reactor Development
	Program (Appendix c).
1970	A memo from the Acting Director of Materials Licensing indicates that the
	existing AEC contract with GE is in the process of termination. Dated June
	11, 1970

5. NGK Metals Corporation and Predecessors 1943-1979

Summary Description

NGK and its predecessors produced beryllium for use by the AEC. This relationship began in 1943 as part of the Manhattan Project. The Beryllium Corporation in Hazelton was asked by representatives of the Manhattan Engineering Program to to conduct analysis of beryllium. By 1979, only Brush Wellman and Kawecki-Berylco were processing beryllium for the AEC. In September, 1979, KBI terminated its beryllium metal production lines.

The NGK predecessor organizations include the following entities:

- ♦ Berylco
- ♦ Kawecki-Berylco
- ◆ Cabot Corporation
- Beryllium Corporation of America.

Supporting Documentation	
1943	An excerpt from the Manhattan District History (Addendum 5.16) notes that on August 23, 1943, Lt. Col. Ruhoff to Mr. Gravely, Beryllium Corporation, that an analysis of beryllium material be conducted by the company. This is the first instance of contact between the Manhattan Engineering Project and the Beryllium Corp to engage in work connected to beryllium material
1946	An excerpt from the Manhattan District History (pg. K-17) reveals that Beryllium Corporation of Reading, PA entered into contract to supply AEC with 1,000 pounds of high purity beryllium metal. Although the evidence suggests a contract was never finalized, there is no evidence to support a argument that there was absolutely no beryllium produced for the AEC under those preliminary arrangements.
1947	A monthly status and progress report from New York operations dated 12/8/1947, noted the construction of a beryllium casting plant at the Beryllium Corp in Reading, PA.
1979	End date established in September, 1979. An Information Memorandum from Director of Military Operations to Secretary of Dept. of Energy describes the termination of KBI product lines.

6. Nuclear Materials and Equipment NUMEC 1960-1968

Summary Description

NUMEC is listed a statutory beryllium vendor under the EEOICPA. The company produced braze materials for use at the Hanford operations. Braze contains zircaloy alloy and **beryllium** powder.

Supporting Documentation	
1960	A December 3, 1959 Office Memorandum describes a contract that would
	be coming into effect in 1960 to supply beryllium coatings for UO2.
1960	Atomic Energy Commission
	Toxic Hazards of Beryllium As Related to the Reactor Development
	Program (Appendix c).
1961	Regulatory Activities Document indicates that NUMEC was licensed for
1901	the production of plutonium-berllium neutron sources.
1962	NUMEC correspondence dated February 19, 1963 reveals contracts
	existed with the AEC through at lease1962
1965	DOE notes indicate that an order for 5000 braze rings was make in
1965	September 1965. (No primary source documents are in file)
1968	An "Information Report on NUMEC Powder Metallurigical Braze Rings"
	dated March 4, 1968 provides a summary of all of the information to date
	concerning braze rings fabricated by NUMEC. The report indicates that to
	date the AEC committed \$84,000 in purchase of powered compacts with
	NUMEC.

7. StarMet Corporation and its Predecessor Nuclear Metals 1954-1986

Summary Description

Starmet/Nuclear Metals originated out of a MIT laboratory operation. MIT was involved in a variety of beryllium related operations. Nuclear Metals assumed control of the MIT laboratory in 1954. Nuclear Metals produced beryllium products for the AEC until 1986.

Supporting Documentation	
1954	In a memo discussing a claim for compensation involving a patient with
	beryllium disease, there is a discussion of the fact that on July 1, 1954,
	Nuclear Metals took over the MIT beryllium operation.
1984	A September 6, 2001 correspondence noted that Nuclear Metals
	Incorporated was the sole supplier of Beryllium Braze rings 1962-1984.
1986	An October 11, 2001, letter to Roger Anders reveals that in 1983, Nuclear
	Metals, Inc received a three-year sub-contracted to produce beryllium.
	Final delivery was made in 1986

8. Wyman Gordon 1959-1965

Summary Description

The dates for Wyman Gordon are derived from notes taken by an employee of the Department of Energy. The notes were taken at a classified records center. While the employee was able to review documents that establish covered dates 1959 to 1965, the source documents could not be copied.

Supporting Documentation

1959-1965 DOE employee notes